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SEMINAR ON SMALL-SCALE INDUSTRY
IN LATIN AMERICA

Sponsored jointly by the Economic Commission for Latin America, the United Nations Centre for Industrial Development and the Bureau of Technical Assistance Operations

Quito, Ecuador, 28 November to 5 December 1966

PROVISIONAL ANNOTATED AGENDA AND PROVISIONAL LIST OF DOCUMENTS

TABLE OF CONTENTS

		Page
FOREWORD		1
A.	PROVISIONAL AGENDA AND PRELIMINARY TIMETABLE OF MEETINGS	3
	1. Provisional agenda	3
	2. Preliminary timetable of meetings	4
B.	PROVISIONAL ANNOTATED AGENDA	7
	1. The contribution of small-scale industry to the development of Latin America	7
	2. Technical services and assistance for the development of small-scale industry	11
	3. Financing for the development of small-scale industry	14
	4. Regional and international co-operation in the field of small-scale industry	17
C.	PROVISIONAL LIST OF DOCUMENTS	25
D.	GENERAL INFORMATION FOR PARTICIPANTS	28
	1. Place and date of session	28
	2. Secretariat	28
	3. Registration of participants	29
	4. Documentation	29
	5. Timetable of work	29
	6. Requirements for entry into the country	29
	7. Reservations	30
Annex	OUTLINE FOR PREPARATION OF NATIONAL REPORTS	30

FOREWORD

The last few years have seen the awakening of a growing interest among the Latin American countries in the problems confronting small-scale industry, as also in the important part which can be played by this type of industry in the industrial development of the region. In response to this general concern, the United Nations, through the Economic Commission for Latin America, the Centre for Industrial Development and the Bureau of Technical Assistance Operations, has organized a seminar on small-scale industry in Latin America, to take place at Quito from 28 November to 5 December 1966.

The aim of this seminar will be to examine the present state of small-scale industry and the problems which arise from its size, and to discuss the future prospects of the industrialization process in the Latin American countries. It will consider in its discussions the measures and decisions which each of the countries under examination should include in its industrial policy in connexion with the fostering and development of small-scale industries, and also the way in which international co-operation may best contribute to a full realization of these ends. The subject will be analysed in its general aspects and in relation to particular branches of industry. The conclusions resulting from the interchange of experience on the subject will be embodied in a final report which the seminar will transmit to the governments concerned through the United Nations.

The annotated agenda given in point B of this document is designed to provide a brief idea of the chief problems to be discussed in the seminar and to be of use in ordering the course and substance of the discussions. It gives short accounts of the main problems affecting small-scale industry and of its prospects for development. In short no attempt will be made during the seminar proceedings to deal exhaustively with the problems relating to every one of the points contained in the agenda, but rather to single out for attention the aspects which seem to be most significant in the present stage of development of small-scale industry in Latin America.

/Small-scale

Small-scale industry constituted one of the foremost subjects of discussion in the Latin American Symposium on Industrial Development held at Santiago, Chile, in March of this year, whose participants were agreed in attributing to it a dynamic part in the process of industrial development in the developed countries with the comment that in those countries it has evolved in such a way as to become well-integrated into a sound industrial system and to form an important part of it.1/

The annotated agenda is followed by a list of documents for consideration by the seminar. This includes a considerable number of monographs on the small-scale industry in different Latin American countries, which contain information that is, of great interest in itself and provide a basis for comparing the experiences of these countries. The willingness of the governments concerned to prepare such monographs is evidence of the interest which the seminar has aroused in Latin America. Papers are also being submitted by the United Nations Centre for Industrial Development, the Economic Commission for Latin America, and by various experts specializing in this subject.

1/ Report of the Latin American Symposium on Industrial Development (E/CN.12/755), Chap. III.

A. PROVISIONAL AGENDA AND PRELIMINARY TIMETABLE OF MEETINGS

1. Provisional agenda

1. The contribution of small-scale industry to the development of Latin America
   - (a) Characteristics of the development of small-scale industry in Latin America
   - (b) Small-scale industry in the over-all strategy of economic development
   - (c) Development possibilities for small-scale industry in specific sectors
   - (d) Over-all promotion programmes for small-scale industry: institutions, priorities in respect of sectors and means of action
2. Technical services and assistance for the development of small-scale industry
   - (a) Technical services for rationalization at the plant level: organization, administration and methods
   - (b) Special training programmes for personnel at all levels and other services in aid of small-scale industry
   - (c) Industrial estates: organization, administration and financing
   - (d) Forms of co-operation and self-help
3. Financing for the development of small-scale industry
   - (a) Alternative policies and their corresponding financing systems
   - (b) Internal and external sources of funds
4. Regional and international co-operation in the field of small-scale industry
   - (a) Possible forms of international co-operation
   - (b) Objectives and machinery of regional co-ordination.

/2. Preliminary

2. Preliminary timetable of meetings

Monday, 28 November

9 - 11 a.m.: Registration of participants

11 a.m. - 12.30 p.m.: Inaugural plenary meeting: inaugural speeches

3.30 - 4.30 p.m.: Plenary working meeting

(1) Nomination of officers for the seminar

(2) Approval of the agenda

(3) Approval of methods of work

(4) Approval of the timetable of meetings

4.45 - 6.30 p.m.: Plenary meeting

The contribution of small-scale industry to the development of Latin America (Item 1)

Characteristics of the development of small-scale industry in Latin America

Tuesday, 29 November

9 - 10.30 a.m.: Plenary meeting

Small-scale industry in the over-all strategy of industrial development

10.45 a.m. - 12.30 p.m.: Plenary meeting

Development possibilities for small-scale industry in specific sectors of industry

3.30 - 5 p.m.: Plenary meeting

Over-all promotion programmes for small-scale industry: institutions, priorities in respect of sectors and means of action

5.15 - 6.30 p.m.: Plenary meeting

Conclusion of item 1.

Wednesday, 30 November

9 - 10.30 a.m.: WORKING GROUP A

Technical services and assistance for the development of small-scale industry (Item 2)

Technical services for rationalization at the plant level: organization, administration and methods

Special training programmes for personnel at all levels and other services in aid of small-scale industry

Industrial estates: organization, administration and financing

Forms of co-operation and self-help

/WORKING GROUP B

WORKING GROUP B

Financing for the development of small-scale industry (Item 3)

Alternative policies and their corresponding financing systems

Internal and external sources of funds

10.45 a.m. - 12.30 p.m.: WORKING GROUP A

Item 2 continued

WORKING GROUP B

Item 3 continued

3.30 - 5 p.m.: WORKING GROUP A

Item 2 continued

WORKING GROUP B

Item 3 continued

Thursday, 1 December

9 - 10.30 a.m.: WORKING GROUP A

Item 2 continued

WORKING GROUP B

Item 3 continued

10.45 a.m. - 12.30 p.m.: WORKING GROUP A

Item 2 continued

WORKING GROUP B

Item 3 continued

3.30 - 5 p.m.: WORKING GROUP A

Item 2 continued

WORKING GROUP B

Item 3 continued

5.15 - 6.30 p.m.: WORKING GROUP A

Item 2 continued

WORKING GROUP B

Item 3 continued

Friday, 2 December

9 - 10.30 a.m.: Plenary meeting: regional and international co-operation in the field of small-scale industry (Item 4)

Possible forms of international co-operation

Regional co-ordination: objectives, and machinery

/10.45 a.m.

10.45 a.m. - 12.30 p.m.:	Plenary discussion meeting: item 4 continued
3.30 - 5 p.m.:	Plenary meeting: item 4 continued
5.15 - 6.30 p.m.:	Plenary meeting: item 4 continued

Saturday, 3 December

9 - 10.30 a.m.:	Plenary meeting: discussion of the report on technical services and assistance for the development of small-scale industry presented by Working Group A
	Discussion of the report on financing for the development of small-scale industry presented by Working Group B

Monday, 5 December

9 - 10.30 a.m.:	Plenary meeting: Consideration of the provisional report of the seminar
10.45 a.m. - 12.30 p.m.:	Plenary meeting: Consideration of the provisional report of the seminar
5 p.m.:	Closing meeting

/B. PROVISIONAL

B. PROVISIONAL ANNOTATED AGENDA

1. The contribution of small-scale industry to the development of Latin America

(a) Characteristics of the development of small-scale industry in Latin America

The evolution of small-scale industry in Latin America has taken place within an economic and social framework that is vastly different from that of the developed countries. This difference is constituted by such factors as shortage of capital, slow economic growth, unstable political and social conditions, the existence of huge numbers of people living practically outside the monetary economy, and of an artisan industry that is almost exclusively engaged in producing simple goods by rudimentary methods.

In spite of such adverse conditions, small-scale industry [2/] has come to play an important part in the economies of Latin America. Thus, it appears from the industrial censuses of the region that in 1960 over 1.5 million persons were employed in small-scale industry in Latin America, which was then 31 per cent of factory employment and 16 per cent of total industrial employment. Its estimated aggregate value for that year was 3,300 million dollars, that is, 21 per cent of the manufacturing product and 16 per cent of the product of the industrial sector as a whole.[3/]

In the present stage of the industrial development of the Latin American countries most small-scale enterprises belong to what are known as the traditional industries, where they operate in direct competition with large-scale industry. In the remaining cases, enterprises of this kind are engaged in work which is either of a very specialized nature or is on such a small scale as to be of no interest to medium or large-scale enterprises.

2/ Small-scale industry is understood to mean manufacturing units of between 5 and 49 employees.

3/ For further information see ECLA, Small-scale industry in Latin America (ST/ECLA/Conf.25/L.17).

/Situations of

Situations of this sort are sometimes due to the existence of special market conditions and to efficient use on the part of small-scale industry of modern equipment and production techniques. In Latin America, however, where small-scale industry has a low average level of manpower productivity - considerably lower than that of manufacturing industry in general - this latter state of affairs seems to be exceptional. One of the main causes of poor level of productivity in this sector of industry is the small degree of mechanization of its production units, whose average installed capacity relative to size is approximately half that of the large-scale units.4/

Moreover, what equipment there is is generally out of date and has to be used and maintained in inadequate conditions. An additional cause often lies in factors relating to the organization of production.

(b) Small-scale industry in the over-all strategy of economic development

In spite of the dynamic role which small-scale industry can play in industrialization and in general economic development, no special strategy has been devised for this sector in Latin America, the concern of the governments being expressed instead in piecemeal measures deriving from a traditional and partial appreciation of the problem. These measures have also been designed to protect small-scale industry rather than to encourage it to modernize itself and thus put itself in a better position to compete with large scale units.

In this connexion it would be interesting to examine, in the discussions of the seminar, the following points: the definition of small-scale industry; ways in which artisan and cottage industry can be helped to transform themselves into modern small-scale industry; the part to be played by small-scale industry in the general development of industry; the obstacles to be removed before small-scale industry can develop in a more adequate fashion; selective growth in branches of industry where small size may be an advantage; and complementarity between different types and sizes of industries.

4/ Ibid.

/The documents:

The documents: La pequeña industria en América Latina,[5] Definition of small-scale industry,[6] The role of small-scale industry in over-all industrial development strategy,[7] and the national studies are a contribution to discussion of this subject.

(c) Development possibilities for small-scale industry in specific sectors

For a proper analysis of the development prospects of small-scale industry it is important to determine which sectors provide the greatest possibilities of growth in the conditions peculiar to each country. That certain branches of industry provide specially favourable conditions for small-scale production has been confirmed even in the most highly industrialized countries. In some cases this has been due to more skilled adaptation of such production to market conditions, to factors of location, to more economical use of transport, or to specialization.

During the discussions an attempt will be made to find out which factors and conditions in Latin America are conducive to the development of small-scale industry and in which branches or sectors of industry they are most effective.

This subject is developed in the document: Development possibilities for small-scale industry in specific fields of industrial activity.[8]

(d) Over-all promotion programmes for small-scale industry: institutions, priorities in respect of sectors and means of action

In most countries small-scale industry is able to exist side by side with medium- or large-scale industries, which suggests that the scale on which it operates is not entirely to the disadvantage. On the other hand, the unfavourable conditions that hamper all forms of industrial production, weigh most heavily on small industry which possesses only the slightest of defences against them. Among the major obstacles to its development are its shortage of capital for purchasing modern machinery and equipment, difficulties in obtaining raw materials, inadequate marketing of its

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5/ ST/ECLA/Conf.25/L.17.

6/ ST/ECLA/Conf.25/L.2.

7/ ST/ECLA/Conf.25/L.10.

8/ ST/ECLA/Conf.25/L.18, presented by Mr. A. Nielson, a United Nations expert.

/products, lack

products, lack of proper training among entrepreneurs, use of unsatisfactory techniques, and under-utilization of installed capacity. In addition to this, most small-scale enterprises deprive themselves of the possibility of planning and controlling their production by failing to maintain accounts of its costs. They also show little capacity for making the changes in their processes of production required for partial alterations in the form or composition of their products. The ignorance of most small-scale industrialists of the possibilities open to them and the want of the necessary guide-lines for carrying out the changes required by the advance of industry often makes them cling to traditional modes of production.

Up till now there seems to have been no definite concern to discover adequate solutions to the problems raised by these obstacles. Hardly any part of the great complex of measures, laws, organizations and agencies determining the industrial policies of the Latin American countries is specially concerned with the assistance and direction of the development of small-scale industry. Government action has generally been partial in conception and effect; it has been embodied in programmes of restricted scope, and has only in a very few cases been placed in the hands of organizations with sufficient powers to act on a national scale on behalf of the small-scale sector as a whole.

Thus the industrial policies of the Latin American governments have not been adequate for the needs of small-scale industry. The special characteristics of the sector and of the environment in which it develops require special treatment, which must be based on fiscal mechanisms that would help it to be profitable while enabling it to maintain its role as a useful factor in society. This is not to say that industrial policies should in general provide unqualified support for small-scale industry, but that it should compensate for the peculiar disadvantages deriving from the size of a large section of it. In recent years the Latin American countries have made great progress in the matter of development planning. Most of them have prepared general medium- and long-term industrial development plans as part of an over-all model. Generally speaking, however, these plans have not provided for any special treatment of small-scale

/industry. It

industry. It follows from this that over-all promotion plans, establishing scales of priorities in respect of sectors and means of action, must now be formulated for small-scale industry. (See Bernhard Stein, Programas globales de fomento para la pequeña industria en América Latina. Criterios generales, instituciones, medidas y prioridades (ST/ECLA/Conf.25/L.8).

2. Technical services and assistance for the development of small-scale industry

(a) Technical services for rationalization at the plant level: organization, administration and methods

The fundamental purpose of technical assistance services for small-scale industry is to provide information on the economic environment in which it develops and on the most suitable methods of increasing the efficiency of its productive organization and management.

The small-scale industrialist is faced not only with the problems of organization, administration and production that arise in his own enterprises, but also with those produced by the peculiarities of the external economic environment to which it belongs. For this reason technical and advisory services for small-scale enterprises must apply both at the plant level (economic assistance for improvement of the economic organization of the enterprise and technical assistance for improvement of the production processes) and at that of branches of industry (technological research, standardization, management, and marketing). It is also important for information to be disseminated by means of leaflets, conferences and seminars particularly intended for small-scale enterprises in different branches of industry in the region.

So far Chile is the only Latin American country to have made full-scale provision of the technical assistance and economic advisory services needed by small-scale industrialists for overcoming the difficulties they are faced with as a result of the size of their enterprises.

/(b) Special

(b) Special training programmes for personnel at all levels and other services in aid of small-scale industry

In spite of the intensive measures now being taken by most Latin American countries in this connexion, their manpower training and apprenticeships programmes still fall short of the growing requirements of their industrial development.

Establishment of special training programmes for small-scale industry must be preceded by extended investigation of the value of developing different forms of small-scale activity in the different conditions of each country. These programmes could then function as part of a general development programme for small-scale industry.

Personnel training for small-scale industry should conform to the following general design: formation of experts for work in technical assistance organizations; formation of administrative personnel; training of intermediate personnel capable of undertaking certain administrative responsibilities; and training of workers and apprentices.

A further important measure in aid of small-scale industry is the organization of sub-contracting systems, which would enable those relations to be established between small- and large-scale industrial units. The existence of such systems in Brazil, Argentina and Mexico provides important examples of what can be achieved in this respect in Latin America. Other measures in aid of the development of small-scale industry, usually of a fiscal nature, have been applied in some countries, e.g. certain legal provisions obliging enterprises to purchase some proportion of their materials in the country, tariff protection for certain goods manufactured on a small scale, exemption of small-scale enterprises from payment of fiscal and municipal taxes on the installation of new plants and authorization for certain capital goods and raw materials for use in small-scale industry to enter the country duty-free.

(c) Industrial estates: organization, administration and financing

The establishment of industrial estates may come to be an important industrial planning tool in underdeveloped countries, by contributing effectively to industrial decentralization and development of the more backward areas.

/The establishment

The establishment of such estates in comparatively undeveloped areas may also be of considerable help in absorbing the labour displaced from agriculture and rural artisan activities.

If the formation of industrial estates is considered as an industrial policy instrument for regional development, it is then the governments themselves, through their specialist agencies, who must be primarily responsible for organizing and putting such estates into operation. The extent of this aid and the ways in which it is given will depend in each case on the conditions prevailing in the country concerned. The government agencies engaged in this kind of work should work in collaboration with associations and co-operatives of small industrialists in the country and with mixed capital companies.

Any industrial estate must possess, as one of its main features, various kinds of basic common services. There should, therefore, be a central administration for co-ordinating the different technical and commercial aspects involved in the provision of such services.

The process of organizing industrial estates has been going on in other countries since the beginning of the '50's. But for the most part very little is known in Latin America of this form of industrial development activity and few other countries in this region have made any headway in it.

(d) Forms of co-operation and self-help

The development of various forms of co-operative association in small-scale industry would enable its industrialists to enjoy certain economic advantages which remain beyond their reach when they operate in isolation. In Latin America the only action of this kind has been that of certain fiscal agencies, which have encouraged and directed the creation of what up to now have generally been consumer co-operatives.

The excellent results achieved by the many different forms of co-operative association in various European and Middle Eastern countries suggest that it would be of great benefit to broaden the sphere of co-operative action in Latin America to other forms capable of meeting the wider needs of small-scale industrialists, such as purchase and supply, credit, and marketing co-operatives.

/It might

It might also be of great benefit to organize special entrepreneurial associations for small-scale enterprises which would enable them to obtain more favourable terms from suppliers of raw materials and from the distributors and vendors of their products.

3. Financing for the development of small-scale industry

(a) Current financing

The conditions in which most small-scale industries operate in Latin America indicate that financing is one of their weakest aspects. To begin with, their internal sources of funds, that is, those generated within each enterprise, are too limited to allow for the growth of the production units.

The high relative costs that come from small scales of production and poor productivity, result in low wage levels and small profits. Hence, the percentage of profits available for re-investment is usually much lower than in units of larger size.

Owing to the lack of accounting and cost studies, the depreciation reserves of such enterprises, when they exist at all, have no relation to their actual requirements. This explains the frequent decapitalization of such enterprises which end up by consuming the whole of their capital.

Moreover, funds from external sources are not available in sufficient quantities to compensate for the weakness of the internal sources. The initial capital is generally provided by a single person or family, that is, from the personal savings of the prospective owner. Consequently small enterprises are generally run by family groups. In many cases, fear of losing control of the enterprise prevents its owner from issuing shares to obtain the capital resources he needs. This is a severe limitation on the growth of this type of enterprise. Again, precisely because of the scale on which these industries operate, there are very few investors prepared to buy shares in them. The owners of such enterprises therefore either find it impossible to gain access to organized stock markets or do not regard it as a useful course of action, a point of view that is strengthened by the additional cost involved in the use of such facilities and their ignorance of the ways in which they can be used.

/Various studies

Various studies made on the subject confirm these observations. It appears from them that share transactions are carried out on the stock exchanges by over 80 per cent of large-scale enterprises but by less than 20 per cent of small concerns.9/

Since medium- and long-term bank loans are, in many cases, reserved for large-scale enterprises associated with the commercial banks, they provide little support for small-scale enterprises. These are forced to resort to other types of credit which are usually less favourable as regards duration and interest rates (overdrafts and short-term bills). Even suppliers' credits for building up capital resources, are less accessible and more costly for these enterprises, because of their difficulty in providing adequate security or, as is required in many cases, the guarantee of a financial institution. The small sums represented by such transactions hold out little attraction, in face of the risks involved, either for suppliers or for the financial intermediaries.

In one Latin American country it has been observed that the various forms of short-term credit provide less than 20 per cent of the investment funds of large-scale enterprises as against over 40 per cent of those of small-scale undertakings.10/

These difficulties are one of the causes of the high production costs of small-scale industry, which, in their turn, make it difficult for resources to be generated internally.

The general characteristics of the financing of small-scale industry which have been given here in broad outline, must surely vary in form among the different countries of Latin America, and also among the different industrial groupings in each country. It would be important for future research on sources and uses of funds in the different sizes of industry to extend and deepen the information now available on these characteristics.

9/ Instituto de Organización y Administration (INSORA), El financiamiento de la industria en Chile, mimeographed edition, 1962.

10/ Ibidem.

(b) Special financial assistance programmes

The efforts made by official food institutions to compensate for the financial difficulties which are limiting the expansion of small-scale industries have generally been lacking in vigour and purpose.

Most of the smaller and less developed countries, in which small-scale industry is relatively of greater importance, have no special programmes of financial assistance for these industries or organizations for directing their application.

Moreover in the countries where there are such programmes, small-scale industry is not taken as the unique and specific objective but is always included in some larger grouping along with artisan or medium-scale industry.

Assistance is given in several different ways. In some cases special credit procedures have been introduced as part of the operations of existing financial machinery. In others a special organization or fund has been set up under the control of a state corporation or industrial bank.

The length of time for which the credits are granted has generally been from 3 to 8 years, but is usually not more than 5 years. The rates of interest have depended on the economic conditions prevailing in each country, but have always been lower than the rates of current commercial bank operations.

The experience of the very few years in which such assistance has been given has in most cases confirmed its usefulness, but has also made it clear that the resources available for these financial aid programmes have been much smaller than the potential requirements of the existing enterprises of the sector. Recently foreign currency resources deriving from external aid have begun to be added to the sums normally available to the official institutions conducting the programmes. During the next few years these resources will probably increase as each country defines its objectives in this matter and builds up the machinery for implementing policies aimed at the achievement of those objectives.

/It has

It has appeared in some cases that financial assistance and technical assistance should be complementary. The effects of the latter are greatly enhanced if it is accompanied by the financial resources necessary to put it into practice. Moreover financial assistance may contribute greatly to persuading industrialists that some form of technical assistance can be of value to them.

The experience gained by the different countries of Latin America in those matters should be compared and discussed in the seminar so that the necessary improvements and additions can be made in the programmes for financing small-scale industries.

4. Regional and international co-operation in the field of small-scale industry

(a) Possible forms of international co-operation

One of the conclusions of the Latin American Symposium on Industrial Development was that the attention given to industrial development in the bilateral as well as multilateral international assistance programmes bears no relation to the great importance attaching to the industrial sector in the Latin American countries.[11/] This is particularly obvious in the case of small-scale industry.

Although there are no figures or records available on international co-operation in the field of financial assistance, it is a known fact that its contribution in this field has so far been very limited.

It is in only a few of the Latin American countries that small-scale industry has access to external credit sources, through development corporations or banks acting as intermediaries. It is in the same position with regard to foreign suppliers' credits, which can only be arranged through intermediary enterprises. These usually charge higher rates of interest than the banks, and thus greatly increase the cost of the machinery and equipment bought.

11/ ECLA, Report of the Latin American Symposium on Industrial Development (E/CN.12/755), chap. IV.

/In view

In view of the great disadvantages of the situation of small-industry as regards external financing, it would be useful to analyse, during the discussions of this subject, the industrial credit policies of the Inter-American and international financial agencies.

In connexion with international co-operation and assistance in the field of small-scale industry, it is worth mentioning the programmes being carried out with the aid of the United Nations Special Fund, the International Labour Organisation (the ILO) and certain bilateral government organizations such as those of the United States acting through the Inter-American Development Agency (IDA), and those of the Netherlands, acting through the Administrative Sciences Research Institute of Delft.

The ILO has for the most part concentrated its activities on personnel training. Its present Latin American programmes are being carried out in co-operation with the United Nations Special Fund.

The ILO and the Special Fund are co-operating with the Panamenian Government in organizing an official body to be responsible for carrying out an extensive programme of assistance for the small-scale and artisan industry of that country.

In Colombia the Special Fund and the Institute of Technological Research are collaborating in a joint programme of assistance for small-scale industry, mainly for the food, metal-transforming, chemical and agricultural equipment industries.

The IDA is granting assistance to twelve Latin American countries which have set up industrial development or productivity centres or are in process of doing so. These centres provide technical assistance and training schemes for supervisory personnel directed particularly at small- and medium-scale industry.

The Administrative Sciences Research Institute of Delft has organized each year since 1955 an international postgraduate course on the problems of small-scale industry, in which Latin American experts have been able to participate on fellowship grants. In view of the benefits which may well result from this type of work, courses on

/small-scale

small-scale industry, similar to those of the Netherlands, are to be organized in the State of São Paulo (Brazil), under an agreement between the State Federation of Industries, São Paulo University and the Research Institute of Delft.

These examples make it clear that there is a wide and diverse field to be covered in connexion with technical assistance for small-scale industry and that it is necessary to increase the scale of present action in this respect.

(b) Regional co-ordination: objectives and machinery

The governments of Latin America have up till now made no systematic attempt to co-ordinate small-scale industry in the region. The Inter-American Productivity Association, however, is carrying out work of this kind in connexion with productivity through the various national productivity centres. It is beyond doubt that similar forms of co-ordination in the field of small-scale industry not only can but will have to be developed more and more as the process of economic integration advances.

One of the points to be discussed in the seminar will be the desirability of setting up a centre for the development of small-scale industry in Latin America. The idea covers not only the centre itself but the different forms and possibilities of international co-operation and regional co-ordination.

The document A Latin American Development Centre for Small-Scale Industry,[12/] presented by Arend Eisenloeffel, of the International Technical Assistance Department of the Netherlands Ministry of Foreign Affairs, provides an analysis of the requirements involved in a centre of this kind.

12/ ST/ECLA/Conf.25/L.21.

/Three of

Three of the many different aspects which may arise in discussions on the creation of this centre deserve special comment: its fundamental objectives; its geographical sphere of action; and its institutional characteristics.

Fundamental objectives. To determine the fundamental objectives to be accomplished by this centre it is necessary, first of all, to define its sphere of action. And for this it is necessary to begin by defining small-scale industry.

As regards the action of the centre, small-scale industry should be taken as constituted by the whole body of small industrial units capable of making a dynamic contribution to the growth of industry. It comprises, therefore, small-scale enterprises of an industrial type which are developing into medium-scale enterprises and also modern industrial units which, on account of their structural characteristics or high degree of specialization, derive from their small size advantages enabling them to compete satisfactorily or more than satisfactorily against similar enterprises operating on a larger scale. The definition thus excludes artisan activities and cottage industry - which is not to say that the centre whose eventual creation is being considered will be unable to concern itself with the problems of these forms of activity at a later stage.

Among the complex problems relating to the development of small-scale industry there are two basic questions of outstanding importance, i.e. research and personnel training.

In the first place, it is worth examining the over-all aspects involved in research, such as definition, analysis and diagnosis of the small-scale industry of each country; strategies for the sector and the treatment to be given it in general economic and industrial programmes;

/definition of

definition of the political instruments suitable for the special circumstances of each country; and elucidation of the operational aspects of each of the measures to be adopted. In this connexion the centre for the development of small-scale industry would be responsible for carrying out intensive and far-reaching economic research work and preparing special programming techniques for the sector, on the basis of the experience already gained in such matters in various countries of Latin America.

The development of small-scale industry also requires the training and education of personnel for the tasks of planning, preparing and executing policies. The centre should be able to make an effective contribution to the training of officials from executive bodies (Ministries of Industry or Development, development corporations and banks, productivity institutes, etc.) and planning bodies (central planning officers, regional and sectoral officers).

Secondly, it is necessary to provide technical assistance for small-scale industry at the plant level. As regards research it will be necessary to make studies for determining such aspects as its production relations and technique co-efficients. As regards personnel training, arrangements should be made for training experts capable of assisting small-scale industrialists in problems varying from engineering to business management.

To sum up, the centre would have to conduct economic and social research in the field of small-scale industry, prepare special programming techniques for the sector, form and train personnel capable of applying those techniques and carrying out research, and train personnel for assisting small-scale industrialists at the plant level, all of which would amount to a complex and far-reaching set of functions.

One proposal for the development of the centre is that it should begin by working on the most general aspects of the question, that is, on economic research, the preparation of programming techniques and the

/training of

training of higher or intermediate-level personnel for the planning and executive bodies in the field of small-scale industry. Work connected with the more particular aspects, such as research into problems at the plant level and training at personnel to give technical assistance to small-scale industrialists, which would require greater resources and expenditure of energy, might then be left to the second stage.

It would be useful if, in the economic research work, the centre also took into consideration the possible effects on small-scale industry of Latin American integration. In this connexion it should pay special attention to the stimulus that small-scale industry would derive from a unified market, at the same time taking into account the effects of the creation and development of industrial units operating on a large scale, and determining the measures for improvement and modernization which should be applied in small-sized units to make them capable of playing a dynamic part in general development.

Geographical range of action. The second important aspect to be considered is creating a centre for the development of small-scale industry is its geographical range of action in the light of the different kinds of situations existing in the Latin American countries.

The more ambitious aims in this respect bring with them a number of problems. The further the centre's geographical range of action is extended the greater and more complicated becomes the problem of directing its work. The ideal would be for it to take in Latin America as a whole, but if this proves to be impracticable, as appears to be highly likely in the present state of affairs, one alternative worth considering would be for it to cover several countries whose requirements and characteristics as regards small-scale industry are much of a kind, without of course excluding the possibility of later extensions of its initial range of action.

In any case, whatever geographical range of action the centre is given, it should be remembered that it will be expected to give special attention to the small-scale industry of the country in which it is established and to work in close contact with special national centres created for functions of the same kind as its own and with the productivity centres that are pursuing a vigorous course of action in the field of small-scale industry.

/Institutional characteristics.

Institutional characteristics. Lastly, as regards the institutional nature of the centre, a large number of possibilities could be explored in principle. But once its objectives have been defined and its geographical range of action determined, it will be possible to single out the alternative that seems most likely to be rapidly and fully carried out and best able to make proper use of the special knowledge and abilities of the different organizations and countries that will probably take part in the new project.

ECLA, which has been engaged in formulating ideas in the field of general development and industrial development and which is concerned, at a practical level, with problems of development and technological research, could take part in the general formulation of the project and of the research and personnel training programmes to be carried out by the centre.

The countries taking part in the foundation of the centre, especially that in which it is to be established, would be expected to make the largest possible contributions of personnel and material resources. These resources would be supplemented by contributions of funds or trained personnel from the international organizations. The Special Fund of the United Nations has, since its inception given continuous and unfailing support in the field of economic development in Latin America. In addition, the Inter-American Development Bank (IDB) has recently set up a pre-investment fund for Latin American integration which is intended to be of use in promoting programme studies and the preparation of new projects. Its first work programme, unofficially presented and discussed at the recent Meeting for Co-ordination of Studies on Integration, held in Buenos Aires (5-7 October 1966) and attended by experts from IDB, ECLA, ALALC, SIECA, OAS and ICAP, envisages for the field of small-scale industry regional operations to strengthen small- and medium-scale industry in the countries of Central America and in the relatively less developed countries with inadequate markets, particularly in matters relating to technology, personnel training and the organization of joint services.

/Specific and

Specific and direct support for the creation and operation of the centre could perhaps be obtained on the basis of agreements with such countries as the Netherlands, France, Switzerland and the United States which have already in the last few years been providing technical assistance for small-scale industry through bilateral agreements.

Lastly, various international organizations such as ECLA, the Latin American Institute for Economic and Social Planning, the United Nations Centre for Industrial Development, the International Labour Organisation and the Organization of American States have made great headway with personnel training activities. Each of these could make a valuable contribution towards a centre of the kind envisaged.

The proposals outlined above are simply intended to serve as a starting-point for discussion during the seminar of the possibility of creating a centre for the development of small-scale industry in Latin America.

C. PROVISIONAL LIST OF DOCUMENTS 13/

Symbol	Title	Submitted by
ST/ECLA/Conf.25/L.1	Provisional annotated agenda and provisonal list of documents	ECLA
I. The contribution of small-scale industry to the development of Latin America		
ST/ECLA/Conf.25/L.17	La pequeña industria en América Latina (Spanish)	ECLA
ST/ECLA/Conf.25/L.2	The definition of small-scale industry (English, French and Spanish)	P.C. Alexander, Consultant, United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.10	The role of small-scale industry in over-all industrial development strategy (English and Spanish)	P.C. Alexander, Consultant, United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.8	Over-all development programmes for small-scale industry in Latin America. General criteria, institutions, measures and priorities (English and Spanish)	Bernhard Stein, BTAO expert
ST/ECLA/Conf.25/L.18	Development possibilities for small-scale industry in specific fields of industrial activity (English and Spanish)	A. Nielson, BTAO expert
—	Estudo das pequenas industrias de São Paulo (Spanish and Portuguese)	Marcos Telles Almeida Santis, ECLA consultant
ST/ECLA/Conf.25/L.11	La pequeña industria en Uruguay (Spanish)	CIDE/CONCORDE/CPU
ST/ECLA/Conf.25/L.13	La pequeña industria en Costa Rica (Spanish)	Ministry of Industry and Trade
ST/ECLA/Conf.25/L.14	La pequeña industria en Venezuela (Spanish)	CORDIPLAN
ST/ECLA/Conf.25/L.15	La pequeña industria en Ecuador (Spanish)	Government of Ecuador
ST/ECLA/Conf.25/L.16	La pequeña industria en Paraguay (Spanish)	Ministry of Industry and Trade

13/ This list contains all the documents received up to 31 October, and a number of others which have not yet arrived. The final list of documents will appear in the report of the Seminar.

Symbol	Title	Submitted by
ST/ECLA/Conf.25/L.19	La pequeña industria en México (Spanish)	Nacional Financiera S.A.
ST/ECLA/Conf.25/L.20	La pequeña industria en Chile (Spanish)	SCT/CORFO
ST/ECLA/Conf.25/L.22	La pequeña industria en Panamá (Spanish)	SENAPI
—	La pequeña industria en Brasil (Spanish)	BNDE
—	La pequeña industria en Bolivia (Spanish)	Ministry of Planning
—	La pequeña industria en Colombia (Spanish)	Planning Department
—	La pequeña industria en Peru (Spanish)	National Planning Institute

II. Technical services and assistance for the development of small-scale industry

ST/ECLA/Conf.25/L.3	Industrial extension services for small-scale industries (English, French and Spanish)	P.C. Alexander, Consultant, United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.4	The role of industrial estates in policies and programmes for the development of small-scale industries (English, French and Spanish)	P.C. Alexander, Consultant, United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.5	Types of industrial estates (English, French and Spanish)	P.C. Alexander, Consultant, United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.6	Stimulation of entrepreneurship and assistance to small industrialists at the pre-investment stage (English and Spanish)	United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.7	Pre-project planning for industrial estates (English and Spanish)	P. Quigley Consultant, United Nations Centre for Industrial Development

/ST/ECLA/Conf.25/L.9

Symbol	Title	Submitted by
ST/ECLA/Conf.25/L.9	Industrial estate plans and projects in Latin American industrial development (English and Spanish)	United Nations Centre for Industrial Development
ST/ECLA/Conf.25/L.12	Evolución de un programa de asistencia a la pequeña industria: el caso de Chile (Spanish)	SCT/CORFO

IV. Regional and international co-operation in the field of small-scale industry

ST/ECLA/Conf.25/L.21	A Latin American development centre for small-scale industry (English and Spanish)	Arend Eisenloeffel, International Technical Assistance Department, Ministry of Foreign Affairs of the Netherlands

REFERENCE DOCUMENTS SUBMITTED BY THE UNITED NATIONS CENTRE FOR INDUSTRIAL DEVELOPMENT

Industrial estates in Asia and the Far East (United Nations publication, Sales No.: 62.II.B.5) (English, French and Spanish)

The physical planning of industrial estates (United Nations publication, Sales No.: 62.II.B.4) (English, French and Spanish)

Problems of procedure, administration and relations that will have to be considered in establishing a United Nations organization for industrial development (A/AC.126/10) (English, French and Spanish)

Industrial estates in Africa (United Nations publication, Sales No.: 66.II.B.2) (English)

Industrial estates: plans and progress (CID/VI/14) (English)

Establishment of industrial estates in under-developed countries (United Nations publication, Sales No.:60.II.B.4) (English)

D. GENERAL INFORMATION FOR PARTICIPANTS

1. Place and date of session

The seminar will be held in the Centro Internacional de Estudios Superiores de Periodismo para América Latina (CIESPAL) at Quito, from 28 November to 5 December 1966. The inaugural meeting will be held there on Monday, 28 November, at 11 a.m.

2. Secretariat

The Economic Commission for Latin America, the Centre for Industrial Development and the Bureau of Technical Assistance Operations will provide the technical secretariat for the seminar.

United Nations Secretariat

Mr. Nuno Fidelino de Figueiredo, Director of the ECLA/INSTITUTE/IDB Joint Integration Programme for Industrial Development: Director of the seminar.

Mr. Igor Krostovsky, Head of the Small-Scale Industry Department of the United Nations Centre for Industrial Development: Technical Secretary of the seminar.

Mr. Max Nolff, Head of the Industrial Economics Unit of ECLA: Technical Secretary of the seminar.

Mr. Gonzalo García, staff member of the Industrial Economics Unit of ECLA.

Miss Juana Eyzaguirre, ECLA: Conference Officer of the seminar.

Liaison Officer for the seminar on behalf of the Government of Ecuador

Mr. Gustavo Chambers, staff member of the Artisan and Small-Scale Industry Unit of the National Planning Board.

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All communications concerning attendance of participants, dates of arrival or any other matter connected with the session should be sent to Mr. Nuno Fidelino de Figueiredo at the following address:

Postal: Casilla 179-D, Santiago, Chile

Cable: UNATIONS, Santiago

/During the

During the course of the seminar, questions relating to the schedule of meetings, documentation and all administrative matters should be addressed to the ECLA Conference Officer, Miss Juana Eyzaguirre.

3. Registration of participants

It is requested that participants and observers enter their names in the register which will be at their disposal at the headquarters of the seminar between 9 a.m. and 11 a.m. on Monday, 28 November. On registering, each participant will receive an identification card without which he will not be allowed to enter the conference rooms. He should indicate on his registration form the working group of his choice.

Punctual registrations on the part of participants will enable an attendance list to be prepared in good time, and will help to speed up the delivery of documents, messages, correspondence and invitations.

4. Documentation

The Conference Officer will be responsible for the distribution of documents. It is strongly recommended that, as far as possible, participants bring with them any documents received before the seminar, as supplies of those will be limited.

5. Timetable of work

It is proposed that the Seminar work to the following timetable: from 9.30 a.m. to 12.30 p.m. and from 3.30 p.m. to 6.30 p.m., with Saturday afternoon and Sunday free. From Thursday, 1 December onwards, the two working groups will meet simultaneously: Group A: Technical services and assistance for the development of small-scale industry, and Group B: Financing for the development of small-scale industry.

6. Requirements for entry into the country

The laws of Ecuador require visitors to the country to have a valid international smallpox vaccination certificate.

/7. Reservations

7. Reservations

Participants desiring to make reservations in the hotels Quito, Embajador, or Colón, should fill in the form which will be sent to them and return it by airmail to Mr. Gustavo Chambers, Liaison Officer for the seminar, Junta Nacional de Planificación, Quito, Ecuador.

Annex

OUTLINE FOR PREPARATION OF NATIONAL REPORTS

The following outline of the chief points to be included in the national reports on small-scale industry is intended to provide a guide for the persons responsible for preparing them in each Latin American country, and thus ensure some degree of uniformity in their presentation. As the field of small-scale industry covers a wide variety of situations and problems, each of which requires special treatment, the present outline should not be taken as providing more than a suggestion of the design to be adopted. Each national report should adapt itself to the particular conditions of the country, and reveal in the greatest detail possible the action being taken in respect of credit facilities, technical assistance, personnel training at different levels, development of co-operatives, sub-contracting arrangements, etc.

The detailed description and analysis of the measures being taken in the field of small-scale industry will have the effect of making the experience of the different Latin American countries more generally available, and will give the seminar a basis on which to discuss and lay down the main lines of a development strategy for a sector which is of the highest importance as a potential source of employment.

I. ECONOMIC IMPORTANCE OF SMALL-SCALE INDUSTRY

1. Description of recent trends in the development of small-scale industry

Summarize the information and statistics available on value added, production value, manpower employed, investment, location, etc. elucidating the main features of the development of the sector and its importance within manufacturing industry and the economy as a whole.

2. Chief branches of small-scale industry

Describe the present situation and problems of the chief branches of small-scale industry such as food, textiles, wearing apparel and footwear, furniture, metal-transforming, etc.

3. Plans and programmes for the development of small-scale industry

State whether there is a policy for modernizing and promoting small-scale industry, the form it takes and the organizations responsible for formulating it. Describe the role assigned to small-scale industry in the programmes and strategy for industrial development. Give a short account of the legislation on the development of small-scale industry.

Note:

For greater clarity, some definition should be given of the concept or concepts embodied in the generic term "small-scale industry", in relation both to its development and to development programmes and incentives established for it (indicators: employment by enterprise, capital, value, sales, etc.) Whenever possible, the United Nations International Standard Industrial Classification of all Economic Activities (ST/STAT/Ser.M/4/Rev.1) should be used in defining the major industrial groups in small-scale industry.

/II. TECHNICAL

II. TECHNICAL SERVICES AND ASSISTANCE FOR THE DEVELOPMENT OF SMALL-SCALE INDUSTRY

1. Technical assistance and advisory services

Describe the different forms of technical assistance given at the plant level and at that of the various branches of industry, distinguishing between assistance for the purpose of technical improvements, organization, or administration, etc.; describe similarly the agencies responsible for providing assistance.

2. Special training programmes for personnel at all levels and other services in aid of small-scale industry

Describe the current systems of training for the different levels of personnel in small-scale industry and existing industrial training centres. It would be useful if data were supplied on the number of persons trained in each separate course during the years for which information is available. Mention also any other existing services in aid of small-scale industry, especially those concerned with raw material supplies and the marketing of its products.

3. Industrial estates

State whether small-scale industries already exist in the form of industrial estates, and outline future programmes for their establishment, specifying the methods of organization, administration and financing to be used for them.

4. Forms of co-operation and self-help

This item should cover all co-operative systems operating in the field of small-scale industry (consumer, credit, production co-operatives, etc.), together with other forms of co-operation and self-help (organizations of small-scale industrialists, business associations, etc.).

/III. FINANCING

III. FINANCING FOR THE DEVELOPMENT OF SMALL-SCALE INDUSTRY

1. Alternative policies and their corresponding systems

Describe financial assistance programmes for small-scale industry, mentioning the institutions responsible for them, the amount of natural resources available for that purpose, the criteria used in allocating these resources, the sums assigned to the different branches of industry and regions of the country, the conditions under which they are granted to small-scale industrialists (period of credit, interest rates, types of security required, etc.), the co-ordination of such programmes with programmes of other kinds (e.g. technical assistance), and so forth.

2. Sources of funds: internal and external

Provide information on the internal sources of funds of small-scale enterprises (depreciation reserves and re-invested profits), including estimates of the sufficiency of the depreciation reserves and an indication of prevailing trends as regards the use of profits (percentage re-invested and percentage distributed). Mention any legal provisions which might affect these sources of funds.

Provide the corresponding information on the external sources of funds of small-scale enterprises (capital contributions, credit, etc.), showing the extent to which they make use of organized stock markets and how far they have access to credit from public and private banks. If possible, give the proportion of the external sources in the total and its distribution in terms of capital, bank credits, suppliers' credits and miscellaneous sources to that.

IV. INTERNATIONAL CO-OPERATION IN THE FIELD OF SMALL-SCALE INDUSTRY

1. Financial assistance

A list should be given of present external financial assistance programmes, whether carried out directly or through a national agency. In this connexion all possible points of information should be given, namely: organization, our country granting assistance, the amount of

/the aid

the aid conditions to be fulfilled by the national industries receiving it, credit terms (duration, interest rates, etc.). The list of programmes should be divided, according to the sources, into multilateral (United Nations, OAS/IDB programmes, etc.) and bilateral (by countries). Mention also whether small-scale industries are granted credit by foreign suppliers of machinery and equipment, and, if so, the sums and conditions involved.

2. Technical assistance

List the programmes of technical assistance currently provided by foreign countries, giving all possible points of information, namely: country granting assistance, national organization or enterprises benefiting from it (separately or by branches of industry), the amount (if possible, broken down into the usual divisions of experts, fellowship grants, equipment, trained personnel, etc.), national contribution to the programme, field of coverage (assistance to particular branches of industry, groups of enterprises, regions, or organizations, etc.) and duration of the programme, supplemented, if possible, by comments on the facts given. If there is any form of co-operation with any other Latin American country, describe the way in which it takes place.

Note on method of presentation

Although no absolute limit is set to the length of national reports, it is considered that about 50 typed pages (1 1/2 spacing), not counting appendices, should be sufficient for the purposes of the seminar.

The decimal metric system of measurement should be adopted unless use of other units is absolutely necessary in which case it is requested that their metric equivalents be given in brackets. To facilitate comparison, it would be helpful if values were given whenever possible in United States dollars, and in all cases, the rate of exchange of the year or years under consideration were stated.

The final date set for acceptance of national reports was 8 September 1966 to give time for their reproduction in documentary form.

UNITED NATIONS

ECONOMIC
AND
SOCIAL COUNCIL

LIMITED

ST/ECLA/Conf.25/L.2
24 August 1966

ORIGINAL: ENGLISH

SEMINAR ON SMALL-SCALE INDUSTRY IN LATIN AMERICA

Organized jointly by the Economic Commission for Latin America, the United Nations Centre for Industrial Development and Bureau of Technical Assistance Operations

Quito, Ecuador, 28 November to 5 December 1966

THE DEFINITION OF SMALL-SCALE INDUSTRY

Presented by

P.C. Alexander, Consultant, United Nations Centre for Industrial Development

THE DEFINITION OF SMALL-SCALE INDUSTRY

In the present paper, the question of definition of small-scale industry is discussed, not as an academic issue, but as a concrete problem arising, principally in the developing countries, in connexion with the formulation and implementation of policies and programmes for the development of this sector.

Smallness being a relative notion, no generally acceptable numerical definition can even be sought. Definitions, where adopted, vary considerably, not only from country to country, but even, sometimes, within the same country. Such variety is entirely justified, since different formulations may be needed to meet different objectives or conditions. Where a measure of uniformity and agreement may be introduced is in the very concept of small-scale industry, that is, the choice of components of the definition, and the differentiation of industry from other productive activities characterized by a "small" scale of operation. The actual values assigned to the components may vary within a relatively broad range.

In this paper, investment in fixed capital is proposed as the base of the definition, in some cases in combination with employment. Also, an attempt is made to distinguish small industry from artisan trades, handicrafts, and cottage industries. While it is hoped that the distinctions made would not give rise to theoretical controversies, it is realized that their adoption might sometimes involve amendments to legislative and administrative acts. Experience shows that, in a number of cases, efforts to promote small industry development have actually been hampered by inadequate definitions. In view of this,

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This paper has been prepared by Mr. P.C. Alexander, Senior Technical Adviser, in co-operation with the Small-scale Industry Section, Centre for Industrial Development.

the considerations expressed in this paper are presented as a frame of reference for elaborating new policies and programmes or assessing the effectiveness of existing ones.

The importance of the role of small-scale industries in industrialization programmes is gaining increasing recognition in the developing countries. Many countries have taken the initiative in studying the obstacles and handicaps which limit the growth of small industries and have introduced special programmes of assistance to existing small establishments and for the stimulation and promotion of new enterprises. In most cases government assistance, particularly in the form of fiscal incentives and concessions, is available to all industries whether small, medium or large. But small-scale industries are in need of certain additional programmes of assistance because of their structural weakness and this calls for special action by government authorities. Such action is aimed on the one hand at strengthening small-scale industries by locating them on common sites, in particular in industrial estates, promoting co-operative and complementary arrangements among them and encouraging the establishment of subcontracting relationships between them and large industries; on the other hand at providing them with assistance, servicing and training through institutions especially set up for this purpose such as small industries service institutes, industrial extension centres, financing institutions, and so on. The government's action tends essentially at assisting small industries to overcome the disadvantages of smallness and achieve higher levels of efficiency. An essential pre-requisite of such action by the government is that the industries which have the potential for development and which are in need of assistance be clearly identified and distinguished from others. Herein lies the importance in developing countries of a formal definition of small-scale industry based on precise and tangible criteria.

Before examining these criteria, it will be useful to emphasize the distinction between small-scale industry on the one side and the artisan, handicraft and cottage industry sector on the other.

In some countries which have introduced programmes for development of small-scale industries, these have been grouped along with artisan trades, handicrafts and cottage industries. The lack of distinction between these groups has often resulted in considerable difficulties in the administration of development programmes and has even limited their usefulness. A common factor for these industries is the smallness of their scale of operations; this has been the justification in some countries for including even small trades such as hairdressing, laundry, and the like in the category of small-scale industry. But problems of small-scale industries are quite different from those of small trades, artisan crafts, handicrafts, and service industries and the policies and programmes for their development have also, therefore, to be different.

An important distinction between small-scale industries on the one side and artisan trades, handicrafts and cottage industries on the other, is that the former represent technologically the "modern" sector of industries, that is industries using advanced tools and techniques of production and management, while the latter cling to traditional processes, equipment and products. In countries where small-scale industries have been grouped along with traditional industries, for example in order to determine eligibility to an assistance programme, the definitions adopted have been invariably designed to cover the smallest-sized establishments. Thus, in a Latin American country, a law for defence of artisans defines an artisan as a manual worker, master workman or independent worker who has an investment in tools, machinery or raw materials of not more than the equivalent of U.S. $1,000, employs not more than six workers and whose monthly sales do not exceed the equivalent of $750.[1/] In that country, artisan industries include small-scale industries, small trades and handicrafts, all of which receive the same benefits under the Government's assistance programmes, which are mostly in the form of fiscal concessions and incentives. The units receiving these concessions are anxious to remain within the limits of the definition so that they do not lose the benefits of Government assistance, and even new enterprises try to remain within the definition in order to take advantage of the assistance programmes. This is an example

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1/ Later regulations raised the capital limit for certain artisan groups: mechanical work, equivalent of $9,000; shoemaking, men's tailoring and hairdressing, $1,500; gold products and photography, $2,500.

of a definition having the unexpected effect of inhibiting expansion and growth of healthy small-scale enterprises, and reducing the usefulness of the Government's promotion and development programmes. There are many similar examples of difficulties created by grouping together enterprises with differing problems and characteristics. An essential step, therefore, for devising proper development programmes for different economic groups is to adopt precise definitions which will distinguish them from each other.

An artisan industry is essentially one which is centred around a craftsman with traditional skills. An artisan may sometimes hire helpers, but generally there will be no division of labour in his establishment. Artisans invariably stick to traditional occupations such as carpentry, blacksmithy, pottery, weaving and so on, and are reluctant to change their crafts or acquire new skills. Even though there is scope for technological improvements in these crafts, the possibilities for transformation into modern manufacturing processes are comparatively limited.

A cottage industry is manufacturing carried out in a household in which all members of the family may sometimes participate. It is often a secondary occupation in which agricultural workers engage in slack periods.

Handicrafts are usually described as undertakings where all productive operations are manually executed. This description is very loose since it may lead to including several types of small industry under the heading of handicrafts. A more rigorous distinction between handicrafts and small-scale industries is therefore called for and it is suggested that the term handicrafts be used to refer only to crafts which require artistic skill in production and whose products have artistic and ornamental value.

It is obvious that there will be considerable overlapping of types of activities within the group of traditional industries, that is, artisan, handicraft and cottage industries, but the traditional occupations as a group should be clearly distinguished from small-scale industries by the division of labour and the "modern" characteristics of the latter.

The distinction between small industries on the one side and medium and large industries on the other is one of size of establishment and scale of operation rather than one of structural organization and type of operation. In many cases "smallness" may be a stage of growth. Industries may start small and may grow in terms of employment, size of plant and equipment and volume and range of output. Some industries may always remain small, though

not necessarily weak, because of certain competitive advantages afforded by small-scale operation. Some may be linked with large industries by complementary relationships.

Different criteria are being used in different countries for defining the size of industrial establishments and the scale of their operations; chief among them are employment, capital investment, volume of sales and consumption of power. These criteria are used either singly or in combination with one another, with different ceilings in different countries. Before proceeding to discuss the merits of the different criteria, a brief reference will be made to distinctions which are sometimes introduced between small and large industries on the basis of certain functional or structural characteristics of the former.

An important characteristic of a small industry which distinguishes it from a large industry is that it has relatively little specialization in management. An extreme view 2/ is that a business ceases to be small when it can no longer be managed by one person. This generalization is, of course, excessive but it is true that one-man management is a feature of many small-scale industries. Other distinguishing characteristics of small-scale industries have been suggested, such as close personal contact of the manager with workers, customers and suppliers, lack of access to capital through the organized securities market, absence of a dominant position in a major product market and close integration with the local community because of local ownership, management, raw material sources or market. 3/ There are many other characteristics of small firms, but all of them are useful in describing small-scale industries and cannot serve as criteria for defining them. A definition, as already stated, should have precise and tangible criteria; otherwise it would be impracticable in operation.

2/ S. Dans Hiram "What is Small Business? A Suggested Criterion Illustrated with Data from the Wool Textile Industry." Explorations in Entrepreneural History, Vol. 7, No. 5, Harvard Research Center, Cambridge, Mass, 1955, pp. 174-179.

3/ Eugene Staley - Foreword to Small Industry Development Organization, Stanford Research Institute, California, 1959, p. VI.

In the vast majority of countries which have adopted a formal definition of small-scale industry, the main criterion is the number of workers in the establishment. The employment criterion is often used along with other criteria such as capital investment and use of power. For example in India a small-scale industry was defined until 1961 as an establishment with fixed capital investment of not more than Rs. 500,000 (about $100,000) and employment of not more than 50 workers per shift if power is used and not more than one hundred workers per shift if power is not used. Much lower limits of employment were suggested by a Working Party at the fourth session of the Committee on Industry and Trade of the Economic Commission for Asia and the Far East held in January 1952. According to this recommendation, a small-scale industry is "one which is operated mainly with hired labour usually not exceeding fifty workers in any establishment or unit not using any motive power in any operation, or twenty workers in an establishment or unit using such power" 4/. In Turkey, industries employing less than ten workers and using less than 10 H.P. of electricity are classified as small industries for statistical purposes. In the United Arab Republic, small industries are defined as those having a total capital investment of less than £E 10,000 ($23,000) or total employment of less than fifty workers.

These definitions are illustrative of the wide differences in the use of the employment criterion. For obvious reasons, the ceilings on employment vary from country to country 5/ and it is neither practical nor even necessary to aim at any uniformity in this standard. But the definitions quoted above show wide variations not merely in the employment ceilings, but also in the combination of employment with other factors as criteria for definition. In some cases, employment is considered along with fixed capital, sometimes along with total capital and sometimes as an alternative to the capital criterion. Further, the capital-employment ratios indirectly implied in these definitions also how wide variations.

4/ Economic Commission for Asia and the Far East - "Definition and Classification of Cottage and Small-scale Industries". E/CN.11/I and T/CIWP2/5 - 1952 (mimeographed).

5/ In the United States, a firm is recognized as a small business for government stores purchase programmes if it employs less than 500 workers; firms with less than 250 workers are recognized as small for purposes of financial assistance. In Japan, industries employing less than 300 workers (and in some cases with a capital ceiling of 10 million yen (about $28,000)) are recognized as small-scale industries.

It is important to consider whether employment, which is the most widely used criterion, is the best suited for defining small-scale industry in developing countries, either alone or in combination with other criteria. The employment cirterion has some obvious advantages. Industrial employment data are widely available. They are required for a variety of administrative purposes such as administration of factory acts, municipal regulations and social security rules, and it is easy to group industries on the basis of employment. A main defect of the employment criterion, however, is that a definition based solely on it may not reveal the real size and scale of operation of an establishment. There are several industries which require high capital investment but only a small number of workers, and it may not be correct to classify such industries as small-scale merely on the basis of employment. Conversely, there are several industries which require very limited capital but a large number of workers, and it may not be correct to exclude them from the category of small-scale industry. If a definition is based only on employment, it may result in including within the group of small-scale industry very large firms with heavy capital investment and low employment, together with small establishments with small capital investment and relatively high employment. This would certainly defeat the very purpose of the definition.

One solution to this problem, adopted in several countries, is to apply a definition based on both employment and capital. However, even this has some disadvantages. The experience in India - which had a working definition based on both criteria - showed that in certain circumstances this resulted in limiting the scope for additional employment. In some cases, small-scale industries receiving the benefits of government assistance programmes such as technical guidance and liberalized credit were reluctant to employ workers over the limits prescribed in the definition, even though they required the services of additional labour, because they did not want to lose these benefits by exceeding the definition's limits. These were small industries which could increase their production by employing more workers without increasing their capital investment, but had not become strong enough to dispense with the benefits of the assistance schemes. In India, as in most other developing countries where unemployment is a serious problem, raising employment is one

of the important objectives of the small industry development programmes, and the Government is keen in encouraging industrial establishments to maximize employment consistent with the requirements of productive efficiency. Thus, when the Government decided to remove the ceiling on employment from the definition, it did so in order to provide an incentive to small industries to employ more workers without losing the advantages of the assistance programmes. The present definition of small-scale industry in India is based only on capital investment (ceiling is Rs. 500,000) without any limit on employment, and the Government's expectation is that this will encourage small industries to employ more people without increasing capital investment proportionately. Obviously, this argument will be particularly relevant in countries where unemployment is very acute. However, even in countries where unemployment is less serious, and where there are special reasons, such as administrative convenience, for adopting the employment criterion, it may be necessary, for the reasons already explained, to use the employment criterion in combination with capital investment and not as an alternative to it.

The next question for consideration is whether capital investment as a criterion for the definition of small-scale industry should be total capital, that is, fixed assets and working capital, or fixed assets only, namely, land, building, machinery and equipment. The main argument for excluding working capital is that a proper assessment of the size and scale of operation of a firm will not be possible if factors such as cost of raw materials, direct labour, manufacturing and administrative overheads, are taken into account. There are several industries which require only small fixed capital investment, but very high working capital; if working capital is included along with fixed capital, they may fall outside the definition of small industry even though they may be typical small industries. Again, the costs of the elements constituting working capital may vary considerably from firm to firm, depending upon the structure and efficiency of management, turnover arrangements and other factors. On the other hand, fixed capital admits of more tangible and definite assessment with comparatively less scope for variation.

Another question for consideration in this connexion is whether for purposes of definition the cost of land should be included in estimating fixed capital costs. The cost of land is largely dependent on its location and

there are wide variations between one location and another even within the same region. A striking difference is between the cost of land in big cities and in rural areas. In order to ensure more meaningful comparisons, it may be advantageous to omit the cost of land altogether from the estimate of fixed capital, and limit fixed capital only to cost of buildings and machinery.

In adopting a definition based on both fixed capital and employment, it is important that the implicit ratio between the two should be a rational one. The definition should, at least roughly, reflect the capital-employment ratio relevent to the conditions prevalent in the country. While no ratio of uniform applicability can be suggested, a ceiling of fifty workers for a (fixed) capital ceiling of $100,000 would seem to be appropriate in many cases.

It is not possible to suggest any ceiling for capital investment which would have uniform applicability. Such a ceiling should be decided taking into account the problems and levels of industrial development in the countries concerned and the objectives laid down by the government for the development programmes of small-scale industry. However, the capital ceiling should be sufficiently high if a quick process of modernization and mechanization in the small industry sector is to be encouraged. There is great scope for promotion of small-scale industries as suppliers of complex components and parts required by large industries and as manufacturers of a wide range of consumer goods and certain types of producer goods of high quality and standard. To that end, small industries should be encouraged to equip themselves with modern tools and machinery. Thus, the capital ceiling adopted for the definition should be high enough to enable small-scale industries to acquire the equipment and machinery they need for functioning on efficient lines. The actual limit of capital investment in the definition is a matter for each country to decide taking into account its special needs and circumstances.

Definitions based on criteria such as value of sales, floor area of factory or quantity of power consumed - which have sometimes been proposed - are clearly irrational and unscientific even in combination with other factors. These criteria vary so much with the type and nature of manufacturing activities that they cannot faithfully reflect the size or scale of an industry.

Whatever may be the criteria adopted for defining small-scale industry, whether employment or fixed capital or both, it is very important that there should be adequate flexibility in the practical application of the definition.

As observed earlier, the importance of a definition in a developing country is that it helps to identify a group of industries with common characteristics and problems and facilitates the administration of assistance programmes. It may often be necessary to vary the criteria or the ceiling of the components within the definition for various types of assistance programmes. 6/ For example, there can be one definition for statistical and another for administrative purposes. Even for administration of development programmes there can be different criteria and ceilings. Thus, there can be one capital

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6/ In India the capital ceiling of Rs. 500,000 in the definition for small-scale industries can be relaxed up to Rs. 1,000,000 in respect of small industries working as ancillaries to large industries. The capital requirements of such small industries are much higher than those of other small industries and in order to encourage small industries to function in ancillary relationship with large industries, this higher limit has been prescribed. At present this relaxation is applied to ancillary units manufacturing components and parts for the following industries:

1. Industrial Machinery.
2. Agricultural and Earth-moving Machinery.
3. Machine Tools.
4. Industrial, Scientific and Mathematical Instruments (Mechanical).
5. Locomotives and Rolling-stock, Ships and Aircraft.
6. Bicycles.
7. Boilers and Steam-generating Plants.
8. Steam Engines, Turbine and Internal Combustion Engines.
9. Automobiles.
10. Commercial Office and Household Equipment.
11. Electrical Machinery, Equipment and Appliances.
12. Telecommunication Equipment.
13. Industrial Instruments (Electrical).
14. Radios and Electronic Equipment.
15. Air-conditioners and Cold Storage Equipment including Refrigerators.
16. Mineral Oil and Petroleum Industries (Ancillaries to only those large-scale units which are engaged in the manufacture of equipment for marketing of refined petroleum products).

See also footnote 5.

ceiling for determining admission to industrial estates and another for free technical services. There can even be different rates of interest and different terms of credit facilities for different size-groups of small industries.

A definition should also be flexible enough to admit an easy adjustment to cope with the growing requirements of industrial development. In some countries definitions have a legal basis, but even in such cases there should be adequate flexibility in making changes and amendments in the course of time. A good definition is one which is precise and clear without being rigid, and which takes into account the changing conditions and problems of industrial development in the country.

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INDUSTRIAL EXTENSION SERVICES FOR SMALL-SCALE INDUSTRIES

Presented by

P.C. Alexander, Consultant, United Nations Centre for Industrial Development

TABLE OF CONTENTS

		Page
I.	SCOPE OF INDUSTRIAL EXTENSION SERVICES	1
II.	INDUSTRIAL EXTENSION POLICIES IN DEVELOPING COUNTRIES	3
	(1) Entrepreneurship development	3
	(2) Selectivity in development	4
	Transformation of artisans into small-scale industrialists	4
	Selective promotion of small-scale industries	7
	Selectivity in location	8
III.	INSTITUTIONS AND METHODS FOR INDUSTRIAL EXTENSION SERVICE	9
	(1) Small Industry Service Institutes	9
	(2) Extension Centres for Specific Industries	12
	(3) Common Service Facility Centres	12
	(4) Extension Service by Large Industries Under the Sub-contracting System	13
	(5) Itinerant Extension Teams	13
	(6) Production and Training Centres	14
	(7) Prototype Production and Training Centres	14
	(8) Industrial Research Institutes	16
IV.	SPONSORSHIP AND MANAGEMENT	17
V.	TRAINING OF EXTENSION WORKERS	20
	Asian Productivity Organization (Japan)	22
	International Centre for Advanced Technical and Vocational Training (Italy)	23
	Research Institute for Management Science (The Netherlands)	23
	Small Industry Extension Training Institute (India)	23

INDUSTRIAL EXTENSION SERVICES FOR SMALL-SCALE INDUSTRIES

I. SCOPE OF INDUSTRIAL EXTENSION SERVICES

The measures of promotion of, and assistance to, prospective entrepreneurs discussed in the preceding section are the first steps in a programme of development of small-scale industry. A further step is to provide counselling and assistance to established industrialists. The transmission of knowledge and expertise to persons engaged or interested in industrial activities is frequently referred to as industrial extension service. 1/

In a broad sense, this concept covers, first, all activities extended for and within the undertaking, which tend to induce and facilitate the establishment of new industrial enterprises and to assist the operation and management of existing ones, and, second, some activities, peripheral to the industrial undertaking, which have a bearing on its modernization, upgrading and growth. The peripheral activities include technological research, technical education, pilot plants and other demonstration projects. In most cases, these relate to industry in general, though special programmes focused on small industry development may be devised. The concept of industrial extension services will be used in this paper in the wider sense of advisory, training, research, demonstration and information activities for small-scale industries.

1/ The term "extension service", originally applied to agricultural training and advisory services provided directly to farmers by roving teams of staff members and technicians of agricultural colleges and experimental stations in the United States, has often been used in the same sense to refer to counselling and advisory services provided to a small industrialist in his own plant. Industrial extension service has also been interpreted as extension of the knowledge of entrepreneur into new fields. The entrepreneur in a small-scale industry has usually to combine functions which, in a larger firm, are carried out by assistant managers, engineers, accountants, etc.; the "extension" of specialized services to a small entrepreneur constitutes, in that sense, an expansion of his staff resources, as well as an addition to his own knowledge and expertise. The above interpretations appear to be rather narrow and somewhat in the nature of semantic exercises aimed at giving meaning to an expression which, ambiguous as it may perhaps be, is nevertheless in common use.

This paper has been prepared by Mr. P. C. Alexander, Senior Technical Adviser, in co-operation with the Small-scale Industry Section, Centre for Industrial Development.

Industrial extension services are given to small-scale industries in four main areas: economic assistance; technical assistance; management development; and product improvement.

Economic assistance covers principally counselling on industry feasibility and prospects, selection of location, fixed and working capital requirements, assistance in obtaining credit, information on availability and prices of raw materials, labour, factory space, production costs of different size units, competitive position in relation to other industries, marketing prospects, profits, and so on. This is the basic advice required by a potential entrepreneur to take the first decisions on starting a new industry or by an existing firm to take decisions on expanding, improving or diversifying its activities.

Technical assistance covers advice and guidance on the choice of materials, machinery and tools and their most efficient utilization in production. It includes advice on the installation of machinery and equipment, plant lay-out, techniques and methods of production, maintenance and repair, testing, and class-room and on-the-job training of workers and supervisors.

Management development covers advice, guidance and training in all aspects of the conduct of a business, including raising of resources, organization, production planning and control, and marketing of products. It includes advice on sources of credit facilities, loan regulations, taxes, costing, bookkeeping, advertising, publicity, selling, sub-contracting, etc. The promotion of co-operative arrangements, including co-operative associations between small undertakings is a relevant activity.

Product improvement is concerned with design and quality. Existing design may be improved or new design substituted for the old one so as to enhance performance, quality and appearance. Advice is given on standardization, quality specifications and quality control.

Training is necessarily involved in the above activities, whether it is provided in an industrial extension centre, a special institution or on the job. As an industrial extension activity, the training provided to managers, supervisory personnel and workers of existing enterprises is, as a rule, more in the nature of upgrading of existing skills and more specialized than that given in business administration courses, technical education and vocational training, to students who have not entered yet into industrial employment.

Industrial research is an essential supporting activity. Technological adaptation or innovation in respect of processes, equipment and products is often of special benefit to small-scale industries. Some processes result in reductions in input of capital and materials; some types of equipment make it possible to produce economically at relatively small capacity or lend themselves to multiple use; some products may be based on local materials or by-products or may meet special demand requirements on narrow markets. An industrial extension service should evidently make use of the results of such research.

The effectiveness of industrial extension service for small-scale industries depends to a large extent on its integration with, and support by, a comprehensive development programme. Small entrepreneurs require not only advice and guidance on the right type of machinery and equipment or raw materials and so on, but also promotion measures of broader scope. Such supporting facilities include tax and customs incentives, credit assistance on easy terms, supply of machines on hire-purchase basis, factory accommodation through industrial estates and other measures. Industrial extension service would be incomplete and might even be ineffective in their absence.

II. INDUSTRIAL EXTENSION POLICIES IN DEVELOPING COUNTRIES

(1) Entrepreneurship development

In countries at early stages of industrial development there is necessarily very little demand for a counselling service designed to improve existing industries. In such countries the main problem is the stimulation of entrepreneurship and the main function of an industrial extension service should be to provide counselling and guidance leading to the establishment of new small-scale industries.

The techniques and methods of extension service for the promotion of entrepreneurship have been examined in the preceding section. A successful method followed in India in this field deserves mention here. This is the "intensive development campaign" organized in industrially backward districts with a view to publicizing and propagating the idea of industrialization by going to the people, instead of waiting for them to approach the agencies for assistance. The campaign is organized jointly by industrial extension agencies and other promotional agencies providing financial and physical facilities.

The first stage of the campaign is to survey the industrial potential of the area in which the campaign is to be conducted. Once the information on industries having prospects in the area is obtained, the industrial extension agencies launch a "contact" programme including convening of meetings and discussion groups, distribution of information literature and exhibition of industrial products and equipment through mobile demonstration vans. During the campaign, wide publicity is given to the various facilities and services the people can expect to get from the extension and promotion agencies if they decide to start any of the industries recommended. This is followed by individual contacts, provision of advice and guidance, facilitation of financing and other forms of assistance until the enterprise is set up. The "intensive development campaigns" have resulted in the establishment of new enterprises in agricultural areas by people who, without them, would not have been involved in industrial activities. While in India this method has been tried mainly in industrially backward districts, it is suitable for application in all areas in any developing country intending to stimulate the establishment of new enterprises.

(2) Selectivity in development

Transformation of artisans into small-scale industrialists

The preponderance of artisan trades and crafts in developing countries presents some special problems in industrial extension service. In most of these countries, the overwhelming majority of manufacturing establishments are of traditional types - cottage or household industries, artisan crafts and handicrafts. In many countries, in particular in newly-independent ones, there are no modern small-scale industries at all, the industrial structure consisting only of a few large-scale and medium-sized enterprises on the one hand, and of artisan and handicraft undertakings on the other. In any programme of industrialization, the future of the traditional group is an important question. Modern technology and industrial processes have made many of the traditional crafts obsolete and wasteful. Factories are steadily replacing artisan workshops in the supply of furniture, agricultural tools, textiles and other products. The emergence of new technologies and new products, changes in social structure and rising income levels have resulted in a reduction in demand for many artisan products.

The implication of these developments is that the promotion and industrial extension policies should be selective. This is not to say that the development of small-scale industry should be at the expense of the artisan and handicraft undertaking. There are certain fields where the artisan workshop can co-exist with the modern small factory and even, sometimes, function in complementarity with it. The scope, not only for survival, but for progress, is particularly great for crafts and trades which produce goods of artistic value and require artistic skill in production. These have an important place in any industrial economy and need to be supported and assisted, preferably by special agencies having at their disposal experts and technicians in artistic trades. Although such crafts cannot and need not be transformed into modern industries, there is much scope for modernization of their production and management.

In some developing countries, extension and in particular training programmes have been introduced to cover the whole range of traditional crafts with the result that declining skills and trades are sustained along with economically useful ones. In a few cases, attempts have been made by development planners to shelter traditional crafts from competition by modern factories through protective measures such as preferential tax incentives and concessions, price subsidies and even quantitative restrictions on production by modern factories. In the long run, such policies help neither the traditional craft nor the modern factory.

An industrial extension service should be concerned with those artisan trades which may play a positive role in a modern economy. It is the duty of an extension agency to identify such skills and crafts and to assist them to improve and develop further. The agency should also endeavour to divert artisans engaged in obsolete and declining trades towards more fruitful areas of industrial activity, so that modernization would not tend to destroy productive capacity, but on the contrary, would contribute to strengthening the industrial economy. This is very important in developing countries where technological unemployment can have disastrous results. The scope for such changes, however, is not uniform either as between or within the various trades.

A very promising line of development is to orient artisans, through adaptation or retraining, towards modern service and construction trades. With the change in the pattern of life in rural areas, the demand for the services of repair and service men for irrigation pumps, diesel engines, tractors, agricultural machinery, etc. has increased considerably and a major difficulty in agricultural programmes in developing countries is now the shortage of skilled workers in such trades. In urban areas, the services of the plumber, the electrician, the mechanic, the radio technician and the construction worker are in increasing demand, and it is good policy for industrial extension agencies to help traditional artisans to acquire these skills.

The scope for transformation of traditional artisans into modern small industrialists through mechanization and modernization in their own or related line is more limited than is commonly believed, but opportunities do exist for converting weavers, blacksmiths, cobblers and the like into textile manufacturers, hardware and tool producers, shoe manufacturers, etc.

As has been stressed earlier, the extension service should seek out prospective entrepreneurs, and not only wait for them. This is particularly necessary in the case of artisans in rural areas who may not have the initiative or motivation to approach the extension agency located in a far away town. The agency will even have to bring to them the workshop itself, for demonstration and training. The mobile demonstration workshop has been effectively tried for this purpose in several developing countries. Mobile vans equipped with simple machines are taken by the industrial extension staff to areas where there is a concentration of artisans, to introduce them to the new tools and techniques. Some artisans may be reluctant to accept any change. Some may require long periods of instruction and training. Many, however, take easily to new machines and tools. In most cases, the mobile demonstration workshop is for the artisans the first real contact with modern technology and there is evidence that it has succeeded in inducing them to modernize their tools and techniques.

A serious limitation to extension work in rural areas is the absence of electricity or other sources of power. Modernization usually means mechanization with use of power. While the availability of power is undoubtedly a prerequisite for industrialization, steps for the modernization of artisan

undertakings need not necessarily be postponed until power is provided. The process of transformation should be phased, and improved tools, machinery and techniques which do not require power should be introduced in the early and intermediate stages. This calls for selecting and, more often than not, devising appropriate technologies, a task which proves to be one of the most difficult in industrial extension service. Very little research has been done so far to evolve industrial technologies suitable for economies at different levels of development, and technologies for rural industrialization, in particular, have been almost completely neglected. The establishment of close links between industrial extension and research is a policy which should gain high priority in any plan or programme of industrial development.

Selective promotion of small-scale industries

In view of the scarcity of capital and skills in the developing countries, and of the competing claims of various economic and social development projects on the available resources, it is essential that small-scale industries should be promoted on a selective basis, taking into account their viability, competitive strength and growth potential. While smallness should not be a handicap, it should not by itself qualify for promotional assistance either.

As stressed in the preceding section, industrial extension agencies should identify the most promising lines of industrial development in various regions and localities, and steer prospective and existing entrepreneurs towards these. In the advanced countries, there is no need for any special agency to assume such a role, since entrepreneurs have sufficient information and can be expected to make proper decisions. In these countries, wrong decisions would not affect appreciably economic progress. In the developing countries, unguided development of small-scale industries might result in a wasteful deployment of scarce resources and in the establishment of weak and inefficient industries which might need to be artificially sustained by subsidies and other concessions. Failures, in these countries, may have a disastrous effect on further entrepreneurial initiatives. It is true that in all countries small-scale industries need some forms of support and protection. Selectivity in development programmes may reduce considerably the period and scope of measures of protection and assistance. Success in the establishment of small-scale industries may be expected to have a positive demonstration effect.

As a rule, an industrial extension agency should give assistance to all who come to it, without any discrimination as between entrepreneurs or types of industries. In a developing country, every initiative should be supported, every need for assistance met. In some cases, however, advising and helping an established entrepreneur to change his line of production may be a better solution than to assist him in keeping alive a precarious, inefficient and economically unsound undertaking.

Selecti ity in location

Selectivity in location of small industries is as important as selectivity in types of manufacturing activity. In most developing countries, the lack or inadequacy of infrastructure in vast regions limits the choice of location of industry. Reference has already been made to non-availability of power in many places. There is scarcity of other facilities as well - transport, communications, water, housing, etc. In economically advanced countries, small industries are often relied upon to play an important role in the planned distribution or dispersal of industries, and are successfully induced to be located in comparatively depressed areas. Even in such areas, the basic infrastructure for industrial development is available, and, given certain special incentives and support, small-scale industries may find such locations to be suitable. In the developing countries, outside of a few "islands" where prerequisites for industrial development exist, it may often be uneconomical to induce the establishment of small-scale industries, even though socio-economic objectives such as industrial decentralization and balanced regional development may be of primary importance. It is the duty of industrial extension agencies to provide guidance and advice on locations offering good prospects for establishment and growth.

The industrial estate may be of value - among other things - in facilitating the establishment of industries in the relatively less developed or backward areas, since it provides an economic justification for the development of basic facilities and services - power, water, transport, factory buildings, extension services, training and so on. Yet, even the location

of an industrial estate presumes the existence of a minimum of basic resources and facilities and of favourable prospects of industrial development, and should be decided on the basis of thorough surveys. 2/

III. INSTITUTIONS AND METHODS FOR INDUSTRIAL EXTENSION SERVICE

(1) Small Industry Service Institutes

Different techniques and methods of industrial extension service have been followed in different countries, and different institutions have emerged to provide such services. The most important among these is the small industry service institute which is a multi-purpose agency for guidance and counselling in the field of economics, technology, management and product improvement. The advantage of a polyvalent institution is that it is able to provide assistance in all fields to a great variety of small-scale industries. The main functions of a small industry service institute are usually the following:

(i) Conduct techno-economic surveys and advise potential entrepreneurs on prospects of establishment of small-scale industries and on suitable locations.

(ii) Prepare "model schemes" for industries of high priority.

(iii) Provide information on all matters of interest to small-scale industries through interviews, newsletters, bulletins, pamphlets, audio-visual aids, press, radio, etc.

2/ It may be noted in this connexion that while an industrial extension agency may be set up independently of an industrial estate - as a rule in a location where there is, currently or prospectively, a concentration of small-scale industries - there are advantages in establishing it on an industrial estate as one of its common service facilities. The staff of an estate extension centre will promote the occupancy of the standard factory buildings and will lend assistance not only to the tenants but to all small-scale industries established in the surrounding area. As industrial estates are being established in various parts of a country, in particular in the less developed ones, the industrial extension centre will become the principal instrument of regional development, its action radiating beyond the limits of the estate.

(iv) Assist and advise small industries in obtaining supporting facilities and help from various sources such as government agencies, hire-purchase corporations, credit institutions, industrial estate authorities, etc.

(v) Advise on modern technical processes, machinery, and equipment.

(vi) Assist in obtaining, installing, operating, maintaining and repairing the machinery, selecting and procuring raw materials; advise on plant layout; work, time and motion study; quality control, etc.

(vii) Demonstrate the use of modern technical processes, machinery and material through workshops and laboratories.

(viii) Prepare designs, blueprints and specifications for machinery and parts, dies, jigs, tools, fixtures, etc.

(ix) Improve management in fields such as production planning and control, financial accounts, cost analysis, labour-management relations, etc.

(x) Provide counselling, guidance and information to small producers in the field of marketing and help them to establish contacts with wholesale and retail dealers and obtain dealers and consumers' reaction to price, quality and design of products.

(xi) Assist small producers to participate in the stores purchase programmes of government, public sector corporations, department stores, etc.

(xii) Assist small producers in producing components and parts for large industries according to standards, specifications and quality requirements.

(xiii) Conduct training courses for all categories of personnel of small-scale industries including entrepreneurs.

(xiv) Carry out research on problems relevant to small industry development and, where necessary, obtain the assistance of industrial research institutes, universities, research laboratories, etc.

To carry out these functions, a small industry service institute should have on its staff specialists and experts in a wide variety of subjects such as economic survey and analysis, engineering, business organization and management, training, marketing, and different branches of technology.

The extension personnel should have wide practical experience in modern technology and management at levels suitable to small-scale manufacturing, aptitude for research and for applying the results of research to the field. Finding the right type of personnel with the required experience and background, and obtaining proper balance in the various fields of qualification such as practical experience, aptitude for promotional work, extension service and research, is a major difficulty in organizing small industry service institutes and other extension service agencies.

Successful operation of a small industry service institute depends mostly on the qualifications, experience and suitability of its staff. A defect that has occasionally been noticed in the working of such institutions is that, after a few years, the staff tends to become bureaucratic, to lose touch with practical problems and to ignore new developments in their own discipline. Especially in such situations, refresher courses and seminars for the staff engaged in extension work are a necessity.

Another way of keeping the expertise of an institute up to date is to associate specialists and experts from other institutions and from private industry in its day-to-day work. No institute, however well staffed it may be, can hope to have experts in all fields and to meet all demands on its services from its clients, nor should it endeavour to do so. An institute should call upon the services of experts from private industry and other sources whenever its own staff cannot provide a particular service. For this purpose, it should maintain panels of experts on various subjects. Close contacts with outside experts will be of benefit for all concerned.

A small industry service institute should have its own workshops and laboratories for training, demonstration and research, located either in its own building or in an industrial estate - in which case these facilities should be operated by it - and mobile demonstration workshops. It should also make use, as necessary, of the facilities and services of private workshops and laboratories for its programmes of research, training and extension service.

(2) Extension Centres for Specific Industries

In areas where there is, because of availability of certain raw materials, skills, market and other factors, a concentration of certain types of industries, it may be justified to set up extension centres catering to the special needs of these industries. There may be, for example, extension centres for leather goods, agricultural implements, wood-working, sports goods, bicycles, etc. It will often be useful to set up such centres as branches of a small industry service institute in order to pool expert knowledge and certain technical facilities. The extension centres may have, in regard to a specific industry, all or most of the functions of a service institute, though they will generally tend to concentrate on technical assistance.

(3) Common Service Facility Centres

Sometimes, it may not be necessary to set up an extension centre to serve the needs of a community of industries, and provision of common service facilities may suffice. These are centres providing to small-scale industries technical services and facilities limited to certain aspects of their production or processing operations, for instance, electroplating, heat treatment, forging, foundry, dyeing, painting and so on. In the developing countries, small industries usually cannot afford to have their own equipment for all their operations, mostly because of scale and capacity limitations, but also because the use of certain facilities requires techniques and skills beyond their competence.

Common service facilities should be set up by an industrial extension centre if these cannot be provided on a commercial basis. This will frequently be the case when current demand is not sufficient to ensure economic operation of the facilities, but prospects exist for an expansion of demand through an increase in the number of industrial consumers. When this materializes, the common service facilities may be turned over to private enterprise, on an individual or co-operative basis.

Common service facilities are among the major features of industrial estates. By contributing to the reduction in costs and improvement in productivity and quality of products they serve the promotion and demonstration purposes of the estates. Some common service facilities, for instance, tool room, maintenance and repair shop, testing laboratory and information centre

may serve all or most industries on the estate; the type and number of other facilities depends upon the size and industrial composition, present and prospective, of the estate, and careful surveys are needed before they are established.

(4) Extension Service by Large Industries Under the Subcontracting System

Small industries engaged in subcontracting or ancillary relationships with large industries frequently receive technical guidance and counselling from the large firms. The degree and extent of extension services provided by the large firms depend on the nature of the contractual relations in each case. Sometimes there is no obligation whatever on the part of the large firm to provide technical guidance, and the firm is free to accept or reject the goods supplied by the ancillary units. In other cases the large firm considers that it is in its own interest to supply not only designs and specifications but also technical help and sometimes raw materials and some financing in order to ensure quality and uniformity in production and timely delivery. Technical guidance and supervision are facilitated when ancillary small industries are located in the vicinity of the large firm. The possibilities of subcontracting and of technical assistance on the part of the large firm are among the reasons which justify the establishment of industrial estates near large industries or the combination, on the same tract of land, of an industrial estate for small-scale industries and of an industrial area for large industries. An industrial extension agency has a role to play in stimulating the establishment of subcontracting relationships and in complementing the technical assistance given by the large firms.

(5) Itinerant Extension Teams

A small industry service institute or an industrial extension centre can reach only a comparatively limited number of entrepreneurs located in the surrounding area. Their services may be extended beyond this area by organizing itinerant extension teams and mobile demonstration projects. The teams pay more or less prolonged visits to small enterprises to diagnose their problems, suggest remedial measures and help in applying these. Promotional and demonstration work is carried out at the same time.

Itinerant teams may also hold "marketing clinics" to help in the sale or export of small industry products. Entrepreneurs are encouraged to bring in their products for exhibition at selected centres and the teams of experts examine their design, quality, packing and other features and provide guidance and advice to improve their marketability.

The technique of itinerant extension teams is particularly useful in countries where industrial development is dispersed over wide areas. It may not be practicable and even necessary to establish extension centres or branches of small industry institutes to cover all industrial centres in a country. Itinerant teams can take care of the principal centres and the small industrialists will have the additional advantage of getting extension service at their own doors.

(6) Production and Training Centres

Production and training are combined in centres where actual industrial operation conditions are reproduced as accurately as possible, so that training may be carried out as an integrated part of the production process, a condition which does not obtain in ordinary training centres. It is because training and instruction are more realistic in a production and training centre that this method of extension service has been recommended in certain situations.

In actual practice, a number of production and training centres set up in developing countries have been only moderately successfully, their main defect being that they operate neither as efficient production centres nor as efficient training centres. The production process can never be effective and realistic with a labour force of trainees who are still learning their trade, and the major objective of the centre is often defeated. Furthermore, training of this type is relatively expensive and, on this ground alone, may not be the best suited for developing countries. Apprenticeship and in-plant training as a complement to regular training appear to be preferable solutions.

(7) Prototype Production and Training Centres

A new type of institution - the prototype production and training centre - has been tried in India in recent years. Three centres have been set up in, respectively, Rajkot (Gujrat State), Okhla (Delhi) and Howrah (Calcutta), with the objective of developing and producing prototype machinery and training

the operative staff of small enterprises in producing such machinery on commercial lines; training is also given to the technical staff of the government extension services so that they may assist effectively the small units in planning and implementing production programmes.

Prototypes of machines, implements, tools, accessories and component parts which can be manufactured by small-scale industries are developed by research adaptation or copying. Training is provided in the workshops of the centres, blueprints and designs are made available to small units and assistance is continued, if need be, at the factory. The objective is to impart to small industrialists the relatively complex techniques involved in manufacturing producers goods. It is considered, no doubt with good reason, that in the absence of specialized training and assistance, the production of these goods, important as it may be for the country's economy, would not be taken up by small-scale industries.

Since the experiment of prototype centres is comparatively new, their usefulness cannot be fully evaluated. However, one evident drawback is that they require considerable machinery and equipment and a large staff, and are therefore a costly means of providing extension services. The development, trial and testing of prototypes of various types demand an investment in machinery and equipment similar to, if not larger than, that of a regular production unit. To be realistic, training of teams of workers of several small enterprises calls for a large number of instructors and other staff; so does research and experimentation.

While the objective of the centres is undoubtedly sound, it may be asked whether the combination of functions relating to prototype development on the one hand and training on the other is necessary and whether they are an economic method of extension service suitable to conditions of developing countries. In India, where the three centres are well equipped and well staffed, there has been some spare capacity which has been utilized for commercial production, job orders, common servicing and general training of skilled workers and supervisors from small industries. Here again, further experience is needed to appreciate the reasons for the existence of spare capacity and the effectiveness of the means adopted for utilizing it. The existing information suggests that there might perhaps be advantages if training were dissociated from prototype research and development, the latter

being the only function of the centres. On the basis of the prototypes and blue-prints prepared by the centres, training might well be provided by other institutions or by private industries, and assistance to the producers may be given by small industry service institutes and industrial extension centres.

(8) Industrial Research Institutes

Industrial research institutes are primarily concerned with research and development of local raw materials, new processes and improvement of existing ones, new products or new uses for existing products, industrial productivity, standards and specifications, choice of technology, scale of operation, etc. In many cases industrial research institutes provide economic and technical counselling and guidance to industry, including feasibility studies, market development and so on. In developing countries, such institutes can also play a very useful role in providing extension services and facilities to industries, particularly small industries. In small countries, or in countries having difficulties in finding suitable personnel for industrial development work, it may be advantageous to combine extension functions with those of the research institutes so that the latter function as multi-purpose industrial development organizations.

For obvious reasons, industrial research institutes are concerned with problems of industry in general. Industrial research benefits industries of all sizes including small-scale industries. As a rule, extension service is needed by the smaller establishments and industrial research institutes providing it have to adopt suitable techniques and methods.

When there are separate agencies for extension service to small industries, close co-operation and co-ordination should be maintained with the work of industrial research institutes. In many cases small industry institutes and extension centres may provide technical assistance on behalf of the industrial research institutes. They can refer to the latter problems with which they cannot deal themselves and in turn carry to the field the results of research from the institutes. Proper co-ordination will ensure economies and better servicing for all concerned.

The need for similar co-ordination and co-operation between different institutions for industrial extension service such as small industry service institutes, extension centres, common service facility centres, prototype centres, etc. cannot be over-emphasized.

IV. SPONSORSHIP AND MANAGEMENT

In the developing countries, industrial extension agencies should, as a rule, be sponsored and financed by the Government, since small-scale industries can hardly be expected to organize, finance and carry out themselves comprehensive promotion and assistance programmes. Management of the agencies, on the other hand, should be entrusted to an autonomous body rather than to a government department. Autonomy would ensure flexibility in operation, a very important consideration in an activity characterized by a great variety of needs on the part of the clients, and requiring, on the part of the staff, much versatility, mobility and a good deal of initiative. In general, government departments are not characterized by prompt adjustment to varying needs in their day-to-day operations. In government-operated extension agencies, the tendency is often for technical and other staff to function as administrators and custodians of rules and regulations rather than experts in their field of competence. Government rules and regulations regarding recruitment of staff sometimes make it difficult to select the right personnel for extension service, whether permanent officials or short-term consultants, and those regarding termination sometimes raise obstacles to the replacement of persons who have not proved to be useful for this type of service. An autonomous agency, on the other hand, is in a better position to formulate programmes, recruit, train and deploy staff, decide on procedures and techniques of extension work for different industries and at different locations. Particularly for its promotion work, the agency should have the discretion and authority of an independent body. Its consultations with entrepreneurs, especially as regards management problems, should be private and confidential. Some latitude in its financial procedures, within the limits of its budget, is necessary if its work is to be carried out promptly and efficiently. The Government's role, in addition to financing, should be to lay down the over-all policies for industrial extension service and to give general directions on programmes without controlling their day-to-day implementation.

A close association should be maintained between autonomous industrial extension agencies and other organizations serving or representing industry. One means of achieving this is to organize an advisory council for an extension agency, in which the interests of different other bodies concerned with industry would be represented.

More generally, the services of an industrial extension agency would be considerably enhanced if supported by complementary action on the part of private groups, such as chambers of commerce and industry, industrial associations, co-operatives of small industrialists and the like. The main objective of these groups is to serve their members on a voluntary basis and to foster mutual assistance. They generally operate on a "no-profit no-loss" basis. Extension work by such groups should be encouraged and assisted by the Government, for instance through grants or loans, or by allowing the use of the facilities of government workshops, laboratories and information services.

In some countries, extension service is provided by mixed sponsorship institutions jointly organized by government and private groups. These are usually set up on the initiative of commercial banks and other such institutions which feel the need to improve the technical and management efficiency of the small borrowing firms. Extension services are then part of supervised credit operations. In other countries, extension services are provided, for the same purpose, by government financial institutions.

In a few developing countries which have reached relatively high stages of industrial development, industrial servicing and consultancy are provided by profit-motivated commercial firms. Their clients are usually the larger industrial enterprises, but some small-scale industries able and willing to pay for consultations also avail themselves of their services.

As small-scale industries achieve a sufficient level of development in a particular area, consideration may be given to transferring to private promotion groups all or part of the industrial extension services originally set up by the Government. In such cases, charges will need to be levied for the services - as a rule, on a non-profit base - though some subsidization and technical assistance may still remain necessary.

In general, industrial extension services provided by Government agencies should be given free of charge. Industrial extension service is primarily intended for a class of people who are not able to afford such services and facilities out of their own resources, at any rate in the early stages, and have to look up to the Government for help. Payment for services and facilities may be considered after small-scale industries have acquired sufficient strength and stability.

A common argument against making extension service free is that it will encourage irresponsibility among the industrialists and lower the quality of the service. If the service is free, there may be a tendency on the part of the industries to ask for it indiscriminately. The resources and staff of the extension agencies are limited and the services offered by them will lack in quality and depth if they are to meet every demand placed on them. The extension services will thus be forced to make their services spread over too wide an area, and the needs and requirements of the really deserving may often be ignored. At the same time, it is argued, the obligation to pay for the services will make the industries more responsible and discriminatory in asking for such services.

These arguments are likely to be valid only in countries which have achieved appreciable progress in industrial development. In countries which are truly under-developed, there will be few industrialists asking for extension services. The problem in such countries, as already stated, is primarily one of promotion of entrepreneurship, and industrial extension agencies have to take the initiative and leadership in seeking out potential entrepreneurs. Even in more advanced countries, many existing small industries are unable to identify their own problems and it is up to the extension agencies to take the initiative and to assist such units without waiting to be asked for. An obligation to pay would discourage many small industries from getting the assistance they need and deserve, and would defeat the very objectives of the programme. It will, therefore, be advisable to make industrial extension service free for small industries in the early stages of the programme.

However, there is justification, even in the less developed countries, for providing some of the services on a payment basis. For example, industries which avail themselves of the services of common facility centres can well be expected to contribute towards their costs, since these may be considered as direct operating costs. Here again the amount of the payment to be made by the industry is a policy matter for each Government to decide. The industries may pay the full cost or only make a contribution towards the cost. In most countries, such facilities are offered by the Government on a no-profit no-loss basis.

When institutes for extension service are sponsored and managed by non-government bodies, the clients will invariably have to pay for all categories of services they get from them. In such cases, Governments can assist small industries by subsidizing part of the costs.

The policy and aim of all industrial extension agencies, including those sponsored and managed by Governments, should be to make the services self-supporting in the long run. The question as to when and how much payment should be levied from the clients is to be decided according to the circumstances in each country.

V. TRAINING OF EXTENSION WORKERS

A comprehensive industrial extension programme requires the services of production technologists, management specialists, industrial economists and administrators. These extension workers have not only to be well-versed and up-to-date in their subjects of specialization, but also trained in methods of extension and communication, to enable them to promote entrepreneurship and to transfer effectively modern knowledge and improved techniques of management and production.

In newly industrializing countries it is difficult to obtain the services of qualified national personnel; the few that are available are often attracted by the higher salaries offered by private enterprises and organizations as compared to Government and semi-public organizations. Moreover, some technicians may lack practical experience in the operation of industrial enterprises and in methods of industrial extension.

In building up an industrial extension service a developing country has, therefore, to formulate from the very beginning in-service training programmes, refresher courses, seminars and fellowships for its staff, in order to build up the cadre of extension personnel and constantly to upgrade their skills. Foreign or international experts recruited for organizing or establishing an industrial extension service should not only train suitable counterparts, but also help organize such programmes.

Broadly speaking, extension personnel need two types of orientation and training. Firstly, all extension personnel need orientation in development economics, principles and methods of management and techniques of extention and communication. Secondly, extension personnel need to bring themselves up to date on both theoretical and practical developments in their field of specialization, so as to be able to provide the most appropriate advice and assistance in the light of the needs and requirements of the country.

The first type of training, namely, orientation in principles and methods of development, management and extension, has to take into account the economic, social and cultural milieu in the particular country or area, and, therefore, could best be arranged within the country, with the assistance of foreign experts, wherever necessary. Depending on the number of personnel involved, the orientation could be arranged as on-the-job training, as a seminar or as a training-course. When an industrial extension service is being planned in a newly industrializing country, it would be useful to send a few selected national personnel on study-visits to countries which have developed extension services and institutions in the context of comparable economic-social situations. Initial orientation to extension personnel should be supplemented by refresher courses and seminars, at least once a year, when extension personnel should have the opportunity to exchange experiences among themselves and with a few industrialists and experts, who could infuse new ideas.

The second type of training, namely, bringing up-to-date knowledge and techniques in different specialized fields, for instance, foundry practice, tool and die making, cost accounting, area survey, and technologies of various types could be undertaken through (a) organization of seminars in the specialized field, which will bring together the competent personnel of the extension service, of research institutions or of large-scale industry, works managers or other supervisory personnel from industrial undertakings, standardization engineers, purchase or marketing officers, and other experts; the seminars should be the forum for discussion of operational problems, analysis of new technological developments and application of new techniques towards the solution of practical problems; (b) award of fellowships to key extension personnel to study and learn advanced methods and techniques in an industrial enterprise, a research institute, a university, a financial institution or a development agency, either within the country or abroad.

The training provided to the officers of the Central Small Industries Organization in India, which provides one of the most comprehensive extension services to small-scale industries, anywhere in the world, illustrates the types of training required. The officers of the organization are given institutional training, in-plant training and supervisory training in the country

as well as abroad. A typical programme includes courses in industrial management and area development for twelve weeks in the Small Industry Extension Training Institute in Hyderabad; training of six-month duration in welding, electroplating, turning, machining, sheet metal, pattern making, foundry, etc. at the Prototype Production and Training Centres at Rajkot and Okhla; in-plant training in chemicals, plastics, paints and varnishes and footwear technology in large-scale enterprises in the country; and training in small business management, leather technology, marketing, foundry practice, tool room practice and other subjects in the United Kingdom, the United States of America, West Germany, Japan, Poland and the Union of Soviet Socialist Republics for durations varying from six to twenty-four weeks.

Training courses in the field of small-scale industry which could be availed of by extension personnel of developing countries, are conducted in a number of institutions, among which are the Asian Productivity Organization Tokyo, Japan; the International Centre for Advanced Technical and Vocational Training, Turin, Italy; and the Research Institute for Management Science, Delft, the Netherlands. Training specially devised for extension workers is provided by the Small Industry Extension Training Institute, Hyderabad, India.

A number of trainees have attended the courses of these institutions under fellowships granted by the United Nations, the International Labour Organisation, bilaterial and multilateral assistance programmes, and individual Governments, including the Government of the country where the institution is set up.

Asian Productivity Organization (Japan)

The Asian Productivity Organization organizes for participants from member countries training courses, seminars, symposia, study-tours and individual fellowship programmes on various aspects of small industry development. It conducts regularly a six-month training course for Small Business Management Trainers and Consultants. One-third of the course covers lectures and seminars and the remaining two-thirds plant visits, field training and individual study. It also conducts an eight-week Small Industries Development Administrators Course, devoted to problems of and measures for the development of small industries, through lectures, discussions and visits. Training

courses or Seminars are also conducted on specialized subjects such as preventive maintenance, marketing, quality control, etc. The courses are conducted in English.

International Centre for Advanced Technical and Vocational Training (Italy)

This Centre is an agency of the International Labour Organization, which conducts courses of three to six months in a dozen technical fields from diesel engine maintenance to electronic data processing. The courses include study of techniques as well as of teaching methods related to the technology. Practical experience is provided in cooperating industries in Italy. Instruction is in English, French and Spanish. Fellowships are awarded by the ILO to personnel from developing countries already trained and engaged in practical instruction or management work.

Research Institute for Management Science (The Netherlands)

The Institute conducts in the English language two international courses of six months duration each per year in small-scale industries. The course, which is at the post-graduate level, provides both theoretical and practical training in investigation and solving the specific management problems of small-scale industries and in the methodology which can be applied to the establishment and promotion of new industries. The course caters to extension officers, development administrators and managers from developing countries.

Small Industry Extension Training Institute (India)

The Institute, which is primarily a staff training college for the extension officers in India, provides courses in area development and industrial management, which are held simultaneously for twelve weeks each. Three courses in each field are offered each year in the English language and are now open to participants from other developing countries as well. The area development course provides both classroom and field training in methods of area and industry surveys; selection of industries, locations and entrepreneurs; methods of industrial development and promotion; planning and management of new enterprises. The industrial management course provides both classroom and in-plant training in management principles, methods and techniques as

applied to small-scale enterprises. Besides these two general courses, specialist courses in advanced production management and management accounting, each of three months duration, are also being conducted. The courses are suitable for extension personnel, development administrators, and managers of enterprises.